Chapter 2: Existing Conditions

The purpose of the Existing Conditions assessment is to identify features, current trends, and opportunities and constraints in the Inner Katy study area for further analysis throughout the study. This chapter provides a summary overview of key facts and considerations related to the existing physical, socioeconomic and environmental characteristics of the study area. The following highlights provide an overview of this chapter, with details found in the remainder of the chapter and a data appendix.

Chapter Highlights

Socioeconomics

- The Inner Katy area is at the hub of the Houston metropolitan transportation network, as well as regional population and employment. It is approximately 11.2 square miles (7,166 acres) and contained 19,748 persons as of the 2000 Census.
- Over the 10-year Census period from 1990 to 2000, Inner Katy population showed a slight decline, although a renewed upward trend was seen in the late 1990s due to development activity.
- Median household incomes across the area range from $12,838 to $44,457.
- Educational attainment is highest in the southwest and extreme northeast portions of the study area; median income levels are also highest in these areas.

Transportation

- While streetcars and walking were once the primary means of traveling about the area, Inner Katy is now dominated by the private automobile and low to moderate use of public transportation.
- Some of the area's busiest roadways cross the potential transit alignments, indicating opportunities to attract riders who currently drive to destinations.
- The Inner Katy area is currently served by 26 METRO bus routes and also includes the Northwest Transit Center – one of METRO's busiest.
- Bus routes currently operating in Inner Katy experienced a 15.7 percent increase in ridership from 1997 to 2002 (rising to 60,407 passengers).
- METRO's long-range plans include a light rail alternative through the area, with four potential stops from the Northwest Transit Center to downtown.

Land Use

- The most significant land use in the area, in terms of acreage, is parks and open space due to Memorial Park and the White Oak Bayou corridor. Next is single-family residential use. Multi-family residential use comprises a relatively small share of the existing housing stock. However, increasing property values are leading to more such development.
- Commercial development is largely dispersed along the area's major roadways and traditional commercial corridors (Washington, Yale, Shepherd, etc.). The Inner Katy area has minimal office development nodes relative to the City's major activity centers.

- Much of the industrial acreage in the area is older and, in some cases, represents tremendous redevelopment opportunity (subject to environmental cleanup and other obstacles in certain areas).
- Undeveloped and underutilized land exists both north and south of the Katy Freeway, contributing to the area's redevelopment potential. More undeveloped land is south of the freeway, but large vacant parcels are prominent in the northwest quadrant of the study area. This could make a northern alignment for high-capacity transit more attractive if it would induce larger-scale development projects.
- Significant redevelopment activity in recent years, particularly in the form of higher-density townhomes and larger single-family homes, is changing the character of some neighborhoods within the area.
- Most all neighborhoods in the study area are anchored by churches, schools and/or other public facilities, which can be sources of transit ridership and are complementary to private development. Study area inventories identified 27 parks, 15 schools, four community centers, four health facilities, four public safety facilities (police/fire), and one post office.
- Various types of special districts have been created in the Inner Katy area to spur economic activity and reinvestment and to protect historical assets. The area includes three Tax Increment Reinvestment Zones, one Texas Enterprise Zone, a portion of Houston's Enhanced Enterprise Community (EEC) area (in the eastern part of the study area), and seven Neighborhoods to Standard areas, as well as the Old Sixth Ward Historical District and the Houston Heights "Multiple Resource Area."

Environmental Features and Constraints

- Two major waterways with well-known flooding problems – Buffalo and White Oak bayous – converge in the study area. Development projects in close proximity to these bayous will likely fall within flood-prone areas identified as the 100-year and 500-year floodplains.
- Bayou corridors are highly valued as urban green space, providing recreational, drainage and habitat benefits and serving as an amenity to nearby private development.
- The Inner Katy area includes a wealth of historical resources, including 57 structures or areas recognized through the National Register of Historic Places, 10 historical marker sites, and one State Archaeological Landmark (former Jefferson Davis Hospital structure).

Development Codes and Ordinances

- While Houston does not have zoning, the City's Code of Ordinances includes provisions that regulate certain aspects of development. Code sections relevant to potential *transit-oriented development* include Buildings and Neighborhood Protection (Chapter 10), Floodprone Areas (Chapter 19), Off-Street Parking and Loading (Chapter 26), and Subdivisions, Developments and Platting (Chapter 42) in particular. Chapter 42 also provides more recently-adopted regulatory tools for neighborhoods to maintain prevailing lot sizes and building lines along particular blocks in the face of new development styles.

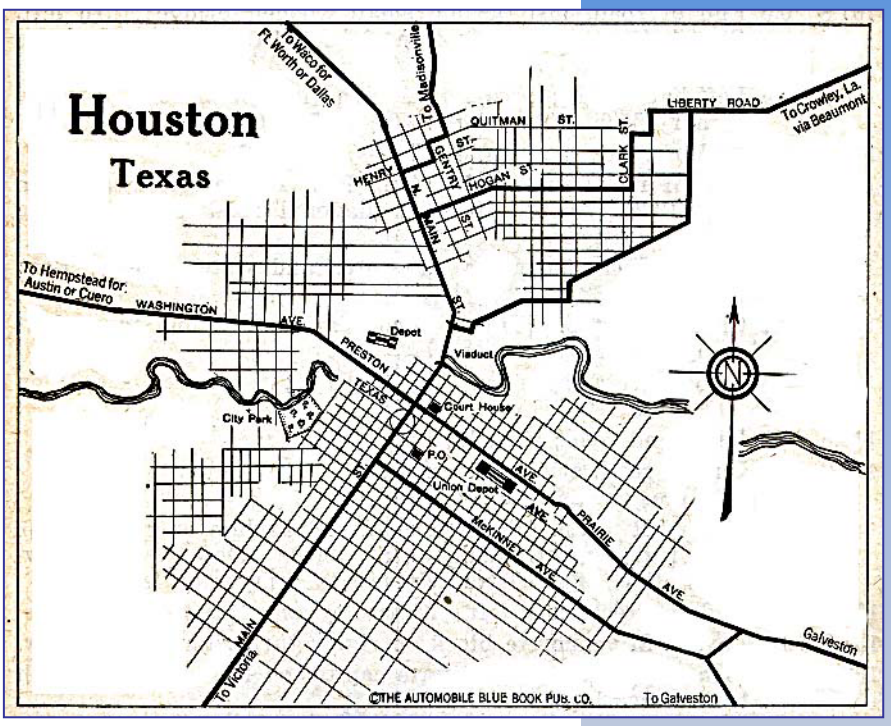
Transit-Oriented Development (TOD) *involves small areas with a mixture of compatible land uses and a direct linkage to transit, the combination of which encourages more walking and transit use.*

- Private deed restrictions remain an effective protection tool in many Inner Katy neighborhoods. Deed restrictions may cover the type of land use as well as the size and density of new development/redevelopment that occurs within the deed-restricted area.
- Between deed restrictions and the neighborhood stabilization aspects of Chapter 42 (e.g., prevailing lot sizes and building lines), certain areas of Inner Katy would not be conducive for the more dense development and mixing of uses that typically emerges around transit stops as the transition to transit-oriented development occurs.

Further detail on these and other study area characteristics are presented in the remainder of this chapter.

Study Area

The study area boundary, as depicted in **Figure 2.1: Inner Katy TOD Study Area**, is IH 45 on the west side of downtown, Buffalo Bayou west to IH 610, the West Loop north to the IH 10-610 interchange, then following IH 10 west to Silber Road. The study area boundary continues northward along Silber, then turns eastward along a line even with 11th Street inside Loop 610. The boundary continues along 11th Street, then along Pecore until reaching IH 45 again. This boundary encompasses approximately 7,166 acres or 11.2 square miles. The study area includes portions of Houston City Council Districts A (Councilmember Tatro), G (Councilmember Keller), and H (Councilmember Vasquez), but primarily District H.



Houston Automobile Blue Book Map (1920)

SOURCE: Perry-Castaneda Library Map Collection, University of Texas at Austin

Regional Context

The study area is situated immediately west of Houston's downtown area. As the fourth largest U.S. city, according to the last two decennial censuses, Houston is the hub of activity for an eight-county region encompassing Harris, Fort Bend, Brazoria, Galveston, Waller, Montgomery, Liberty and Chambers counties. This region represents the geographic area affected by the *Metropolitan Planning Organization's (MPO)* transportation policies. The region is linked by a highly automobile-oriented system of interstate and U.S. highways and circulation loops as well as METRO transit centers as illustrated in **Figure 2.2: Area Transit Facilities**. The study area includes several major highways: Interstate Highway 10 (Katy Freeway), Interstate Highway 45 (North Freeway), and Loop 610 (West Loop).

Metropolitan Planning Organization (MPO) *refers to the regional transportation agency that coordinates federal, state and local transportation planning and funding. The Houston-Galveston Area Council (H-GAC) fulfills this function locally.*

Given its geographic location adjacent to the region's major transportation corridors, the Inner Katy study area is central to the regional population and employment hubs and of significant value to the future of the entire area.

Socioeconomic Characteristics

The study area's socioeconomic character, trends and features are key to understanding housing, population, employment and other factors critical to the success of a transit-oriented development strategy.[1] Following this inventory chapter, the Baseline Opportunities Analysis in Chapter 4 considers the area's demographic profile (age, race/ethnicity, income, educational attainment) in more detail to gauge Inner Katy's economic potential. Socioeconomics and the density of future population and employment are also key components of transit viability, which is evaluated in the Feasibility Analysis in Chapter 6.

Population Growth

- Houston's population increased significantly throughout the 20th Century as displayed in **Table 2.1: Population Growth Comparison**.

TABLE 2.1:
Population Growth Comparison

Year	Population (in Person)			Rate of Growth		
	Houston	Harris County	State of Texas	Houston	Harris County	State of Texas
1970	1,232,802	1,741,912	11,198,655	-	-	-
1980	1,595,138	2,409,547	14,225,513	29.4	38.3	27.0
1990	1,630,553	2,818,199	16,986,510	2.2	17.0	19.4
2000	1,953,631	3,400,578	20,851,820	25.2	20.7	22.8

Source: U.S. Census Bureau

- Since 1970, population has increased 37 percent. Most notable was the influx of minority populations, particularly for the period from 1990-2000.
- Within the Inner Katy study area, population actually declined from 1990 to 2000 despite ongoing and recent development activity. According to the 2000 Census, the study area population was 19,748 persons. One can only speculate on reasons for this outcome without the benefit of detailed, block-level Census data (not yet released at the time of this study). However, residents and others familiar with the area believe the Census

[1] Only some of the 2000 Census data had been released at the time of this study, primarily Summary Files 1 and 2 (SF 1 and SF 2). SF 1 contains data collected from the Census Bureau's "Short Form" and includes age, sex, households, household relationship, housing units, and tenure (whether the residence is owned or rented). SF 2 consists of more detailed tables focusing on age, sex, households, families, and occupied housing units for the total population. Other data, such as income, education, employment, and various housing characteristics will be released later this year in Summary File 3 (SF 3). For the purposes of this study, 1997 data for these other socioeconomic indicators was used as published by the U.S. Department of Housing and Urban Development.

results – based on Spring 2000 data collection – do not reflect the recent growth surge. Factors possibly offsetting gains from new construction include the likelihood of some Census undercount, displacement of previous dwellings and residents, and possibly fewer persons per household (on average) in newer residential units.

Population by Superneighborhood

The study area includes four "superneighborhoods" as designated by the City of Houston. More specific data on these areas is presented in **Table 2.2: Superneighborhood Population and Density**.

TABLE 2.2:
Superneighborhood Population and Density

Superneighborhood	Population		Persons per Sq. Mile	
	1990	1997	1990	1997
Memorial Park/Washington Avenue	18,057	16,815	2,274	2,118
Lazy Brook/Timbergrove	11,465	11,689	3,207	3,270
Greater Heights	42,456	41,161	5,816	5,638

Source: City of Houston Planning & Development Department

Only the Lazy Brook/Timbergrove area showed an increase in population from 1990 to 1997 while the Memorial Park/Washington Avenue and Greater Heights areas showed population decreases. Only a small portion of the Spring Branch East Superneighborhood is included in the study area, and none of this portion is populated.

Other Key Indicators

The following characteristics are displayed geographically in **Figure 2.3: Socioeconomic Indicators**.

Age

- According to the recent 2000 Census, age characteristics vary tremendously between census tracts in the study area.
- As displayed in Figure 2.3, Census Tract 510.1 in the southeastern portion of the study area shows the highest ratio of children aged 5 to 18 years (25 percent).
- Tracts 510.6, 510.9 and 520.1, predominately in the northwest sector, also show a high proportion of children aged 5 to 18 years; however, 510.9 and 520.1 show the highest ratio of persons aged over 65.
- In tracts 510.7 and 510.8, children under age 5 represent four percent of the population.
- Also in tracts 510.7 and 510.8, populations for age groups 5 to 18 and 18 to 21 are both below 10 percent.

Race/Ethnicity

- Racial/ethnic diversity varies greatly between census tracts as shown in Figure 2.3.

- Tracts with the greatest percentage of Whites are in established neighborhoods near Memorial Park (79 percent) and along the north side of White Oak Bayou (84 percent).
- Tracts with the highest ratio of Blacks are 510.1 in the southeastern portion of the study area (20 percent) and 510.5 in the area north of IH 10 between Heights Boulevard and Shepherd Drive (19 percent).
- Asian populations in the study area are limited, ranging from 0.9 percent to 4.8 percent in the various census tracts.
- The Hispanic population continues to increase across the study area as in many parts of Houston and statewide.

Income

- The most recent data available for income is from 1997. At that time, the percentages of households in the City of Houston for various income brackets were as follows:

Under $15,000	23%
$15,000 to $25,000	18%
$25,000 to $35,000	16%
$35,000 to $50,000	15%
$50,000 to $75,000	14%
Over $75,000	15%

- According to the 1997 data, *median household incomes* ranged from $12,838 in tract 442.02 (northwest) to $44,457 in tract 515.01 (southwest).

Median Income
refers to the amount which divides the population into two equal groups, half having annual income above that amount, and half having annual income below that amount.

Educational Attainment

Identifying the level of education attained by the population residing in the study area limits provides insight to income potential as well as job skill sets and other factors.

- Within four of the pre-2000 Census tracts (504.0, 505.02, 514.02 and 516.02) at least 50 percent of the population did not have a high school diploma.
- The percentage of the population over age 25 with a high school diploma ranged from 18 percent in tracts 505.02 and 515.01 to 29 percent in tract 442.02.
- For persons with a Bachelor's degree, the greatest percentage (25 percent) was in tract 506.02 and the lowest (7 percent) was in tracts 516.02, 514.02 and 442.02.
- Census tracts 506.02, 515.02 and 515.01 had the highest educational attainment (post-graduate), ranging from 12 to 15 percent of the population. These census tracts also had the highest levels of median income.

Business Establishments

General types of business establishments in the study area were identified based on readily-available data from the 1997 Economic Census. While the Harris County Appraisal District has detailed land use coding at the parcel level, this information is based on legal descriptions and property ownership and is more representative of

site improvements and structures versus types of business establishments. The Baseline Opportunities Analysis in Chapter 4 considers the existing business mix and market situation in greater detail.

The Economic Census data is published by zip code, of which there are five overlapping within the study area. The data below is for zip code 77007, which encompasses most of the study area, as shown in Figure 2.1. The categories of business establishments are based on the North American Industrial Classification System (NAICS).

- Total of 517 establishments
- Professional, scientific & technical services: 175
- Retail Trade: 93
- Manufacturing: 78 establishments
- Accommodation and food services: 58
- Other services (except public administration): 51
- Administrative & support & waste management & remediation services: 34
- Educational services (Taxable): 3
- Health care and social assistance (Taxable): 23
- Arts, entertainment & recreation (Taxable): 2

New commercial redevelopment along Washington Avenue near Shepherd/Durham

Transportation and Utility Infrastructure

Information on the existing and projected transportation network and utility infrastructure systems within the Inner Katy study area was compiled from data resources made available by the City of Houston, METRO and the Houston-Galveston Area Council (H-GAC) and supplemented by other sources. An assessment of current roadway and traffic conditions and existing transit service is necessary to understand how people move through and about the study area, what key destinations generate and attract significant traffic and activity, and what opportunities may be available for introducing *high-capacity transit* as a viable transportation option. The extent and adequacy of current and future programmed utility infrastructure will also be a key factor in the type of private development that could occur in the area – whether or not the long-term development pattern is influenced by potential transit investments. These types of transportation and utility considerations are revisited in greater detail in the Feasibility Analysis in Chapter 6 and the Preferred Scenario and Implementation discussion in Chapter 7.

High-Capacity Transit *involves faster and more frequent service, longer service hours each day, and two-directional service in the same corridor versus traditional one-way service types.*

- The transportation system of the study area is composed of various modes, historically dominated by streetcars and pedestrian movement; now dominated by the private automobile and low to moderate use of public transportation.

- The study area has a number of commercial and industrial uses that depend heavily on the transportation system not only for access to customers but for the movement of goods via truck and/or rail.

Existing Roadway Network

The existing roadway and transit networks not only function to move people and goods within the study area, but also through it, to downtown, to the Galleria or "Uptown," and beyond to suburban areas around Houston. A variety of interstate, state, and local facilities comprise the automobile transportation system in the study area, as described below. The overviews of Interstate Highways 10 and 45 are from the draft 2022 Metropolitan Transportation Plan Update under development by the Houston-Galveston Area Council. Although the Houston area is also served by various non-Interstate U.S. and State highway facilities, none traverse the study area except for the portion of US 90 that overlaps IH 10.

Interstate Highway 10

- As the primary east-west controlled access freeway linking much of the Houston metropolitan area, IH 10 facilitates out-of-region passenger travel and freight movement and is a major commuter route to and from the Houston CBD from western Harris, Fort Bend and Waller counties. The segment within the study area is also known as US Highway 90.
- The IH 10 corridor runs generally parallel to each of the proposed high-capacity transit corridor alternatives. Along IH 10, Alignment A intersects near Studemont, and Alignment B intersects at Yale.
- Major intersecting streets within the study area with access to IH 10 are Washington Avenue, T.C. Jester, Durham, Shepherd, Yale, Heights Boulevard, and Studemont. Significant parallel streets include White Oak Drive and 11th Street north of IH 10 and Washington Avenue and Memorial Drive to the south.
- Future improvements to the Inner Katy portion of IH 10 are expected to include connection of frontage road segments that are currently discontinuous due to railroad crossings and other physical obstacles.

Interstate Highway 45

- At the eastern edge of the study area, IH 45 is a north-south controlled access freeway that connects to Spring, Conroe, The Woodlands, Bush Intercontinental Airport and Dallas to the north and to Texas City, Galveston, various other coastal communities, the University of Houston, Hobby Airport, Ellington Field and NASA to the south.
- Within the study area, IH 45 is directly accessible from Memorial Drive and Houston Avenue, IH 10 and Main Street.

Interstate Highway 610

- Also referred to as Loop 610, this controlled access freeway provides a circumferential route around the central city and facilitates circulation between major highway corridors radiating from the Central Business District.

- The "West Loop" forms a portion of the western edge of the study area, separating Memorial Park from developed areas along North Post Oak.

City of Houston Major Thoroughfares

- Thoroughfares and other major and minor streets within the study area are maintained by the City of Houston.
- Through its Major Thoroughfare and Freeway Plan (last updated in 2001), the City assigns one of four "functional classifications" to every roadway: (1) principal thoroughfare, (2) thoroughfare, (3) collector, or (4) local street. Roads are classified based on the type of service they are intended to provide on a spectrum from traffic movement to property access. As outlined further in **Table 2.3: Street Classification Characteristics**, typical classification factors include:
  - length of road;
  - existing and projected traffic volume;
  - character of adjacent properties;
  - possibility of expansion, including manmade and natural barriers; and,
  - need to preserve thoroughfare corridors.

  These characteristics are documented for specific street segments in the study area in **Table 2.6: Street Classifications, Number of Lanes and Right of Way** (see Appendix to this chapter).

TABLE 2.3:
Street Classification Characteristics

Classification	Distance	Connections	Volume	Distribution
Principal Thoroughfare	More than 5 miles	Connects freeways and other Principal Thoroughfares	30,000 vehicles per day	Spaced 3-5 miles apart
Thoroughfare	More than 3 miles	Connects freeways and Principal Thoroughfares	20,000 VPD	Spaced 0.5-1 mile apart
Collector	1-2 miles	Connects Thoroughfares and Local streets	More than 5,000 VPD	Less than 1 mile spacing
Local	Less than 1 mile	Provides access to homes and local businesses	Carries little traffic	Accommodates on-street parking and pedestrians

Source: City of Houston

Traffic Volumes

Traffic volumes identify existing travel patterns and assist in assessing the transportation system's ability to serve the area travel demands. The most recent available 24-hour traffic volume counts for major area roadways were obtained from the Traffic Management & Maintenance Branch of the City of Houston Department of Public Works & Engineering. Traffic volumes on area interstate highways were obtained from the Texas Department of Transportation.

As shown in **Table 2.7: Traffic Volumes** (see Appendix)**,** the most recent volumes available in the study area range from 3,166 vehicles per day on Sawyer (between Washington Avenue and Memorial Drive) to 106,724 vehicles per day on Memorial Drive (between Shepherd and Westcott). Aside from the heavily-traveled Interstate Highway corridors, the highest traffic volumes are found along Memorial Drive, South Shepherd at Buffalo Bayou, and Washington Avenue near Old Katy Road. Recent development activity in the area has likely led to increased traffic volumes on some of the major corridors. Of the 54 traffic counts available for the study area, some of the busiest corridors intersect with one or both of the alternative high-capacity transit alignments as illustrated in **Figure 2.4: High Volume Traffic Corridors**.

Rail

- Rail lines are a dominant feature of the study area, both in corridors that continue to be used regularly for freight operations as well as historical rail locations.
- While *grade separations* exist at several roadway intersections, automobile traffic is stopped periodically each day by passing trains at the at-grade crossings on several key roadways in the study area, particularly at Shepherd/Durham, Heights Boulevard and T.C. Jester.

***Grade Separations** are sometimes constructed to separate conflicting transportation modes (e.g., autos and rail, autos and bikes/ pedestrians). Typically, an over- or underpass will separate a rail line from the local street system, improving safety and mobility for both modes. Traffic volumes and risk levels determine grade separation priority since such projects can be costly to design and build.*

Transit

Public transportation services are provided by the Metropolitan Transit Authority of Harris County (METRO) within the Inner Katy study area. Services include local fixed-route, express, commuter, and Americans with Disabilities Act (ADA) complementary paratransit services. The study area is also home to one of METRO's busiest transit centers, the Northwest Transit Center. Another METRO transit center, the Heights Transit Center, is located just outside of the study area.

The remainder of this section covers public transportation facilities and routes, service characteristics, and ridership in the Inner Katy study area.

Northwest Transit Center

- The Northwest Transit Center is located on Old Katy Road, just east of North Post Oak Road, as displayed in Figure 2.2.
- The facility was built in 1990 on just over 10 acres of land.
- The Transit Center includes approximately 200 parking spaces and 12 bus bays (eight regular and four articulated).
- During the 7:00 a.m. - 8:00 a.m. peak hour each day, 167 buses enter and exit the Northwest Transit Center.

METRO Bus Services

- The Inner Katy study area is served by 26 separate METRO local, express, and commuter routes as identified in **Table 2.4** and **Figure 2.5: METRO Bus Routes**. Bus route descriptions are included in the Appendix to this chapter.
- While the majority of routes serve the Inner Katy study area with local stops or stops at the Northwest Transit Center, three commuter routes only pass through the area, traveling on the IH 10 Katy High Occupancy Vehicle (HOV) Lane. Those three routes are 210, 221 and 228.

The Northwest Transit Center, at Loop 610 and the Katy Freeway, is one of METRO's busiest centers

- In addition to local, express, and commuter bus routes, METRO provides complementary ADA paratransit service for eligible persons. This shared-ride curb-to-curb service is known as METROLift.

TABLE 2.4:
METRO Bus Routes

Inner Katy Routes	Northwest Transit Center Routes	I-10 Katy HOV Routes
Local	***Local***	***Express***
17 Tanglewood	20 Long Point	131 Memorial Express
26/27 Inner/Outer Loop	33 Post Oak	***Commuter***
34 Montrose	36 Kempwood	210 West Belt P&R
37 El Sol	40 Pecore	221 Kingsland P&R
40 Pecore	43 Pinemont Plaza	228 Addicks P&R
48 West Dallas	58 Hammerly	285 Uptown Post Oak/Greenway
50 Heights	72 Westview	298 Addicks-NWTC-TMC
65 Yale	85 Antoine Ltd	
70 Memorial	93 NWTC-Greenway Plaza Shuttle	
455 Trolley E	***Express***	
	131 Memorial Express	
	Commuter	
	214 Northwest Station P&R	
	216 Pinemont/West Little York P&R	
	285 Uptown Post Oak/Greenway	
	298 Addicks-NWTC-TMC	

Source: METRO

Span of Service

- METRO service is available during many hours of the day in the study area as shown for the typical weekday in **TABLE 2.8** (see Appendix).

Headway and Maximum Buses in Service

- Route headway measures service frequency, referring to the interval (in minutes) between two successive departures of buses. The maximum number of buses in service describes the total pieces of equipment (buses) in operation during the peak of service operations. Average peak headways and the maximum number of buses in service for each route operating in the Inner Katy area is included in **Table 2.9: Headway and Maximum Buses in Service** (see Appendix).

Fares

Variable Fare Structure *refers to fares that differ according to the length of trip, time of day, speed or quality of service, or discount eligibility.*

- METRO's base fare is $1.00. However, METRO has a *variable fare structure*, dependent upon discount eligibility and trip zone. Discounts are available to seniors, students (middle and high school), disabled persons, and Medicare card holders. Children ages 5-11 qualify for a youth fare, and children under the age of five that are traveling with an adult ride free.
- Commuter route fares are based on a zone structure that varies by trip length. All express routes are considered a part of Zone 1. Local and commuter bus fares are examined in **Table 2.10: Fares** (see Appendix).

METRO Route Ridership

- As a whole, the METRO routes operating in the Inner Katy area have experienced a 15.7 percent increase in ridership, increasing from 52,219 in FY97 to 60,407 passengers in FY01. However, some routes (20, 34, 36, 40, 43, 48, 70, 72 and 93) have experienced an overall decline in ridership over the past five years. This demonstrates that routes intersecting with the study area have gained ridership in recent years, but the data does not account for the number of passengers that get on or off at various points in the area.
- Commuter routes in the Inner Katy area had the highest growth rates, ranging from 121.4 percent (Route 216) to 11.7 percent (Route 285). Express routes grew 12.7 percent, and local routes grew 9.6 percent as a group. In short, local METRO routes in the study area are not gaining ridership as quickly as Park and Ride routes, which attract riders mostly from outside the Inner Katy area. These trends are derived from **Table 2.11: METRO Route Ridership** (see Appendix).

METRO Planned Improvements – Short Term

- Other than the potential for minor alignment or headway adjustments in response to changes in demand and the possibility of additional parking at the Northwest Transit Center, METRO currently has no plans for changes to the route system that is in operation in the Inner Katy study area. All route changes that were carried forward from the Regional Bus Plan (2010 horizon) have been put into place.
- A Shepherd/Durham Transit Center was included in the Regional Bus Plan. The implementation of this facility has been tabled pending a decision on high-capacity transit in the Inner Katy study area.

METRO Planned Improvements – Long Term

- METRO is developing a long-range plan, known as METRO Mobility 2025, that will offer a comprehensive look at future public transportation needs.
- METRO Mobility 2025 is *mode-neutral*, except for the METRORail light rail project currently under construction. The form or forms of future advanced high-capacity transit will be defined through corridor planning studies.
- Corridors under study or to be studied in the future include:
  - North-Hardy
  - Southeast-Universities-Hobby
  - U.S. 90A
  - Uptown-West Loop
  - Katy Freeway
  - Harrisburg
  - Tomball-State Highway 249
  - State Highway 288
  - Westpark
- METRO previously identified two potential high-capacity transit alignments in the Inner Katy study area following existing Union Pacific and Southern Pacific rail rights-of-way. Additional alignment possibilities were considered through this TOD study and will also be evaluated through METRO's own corridor study efforts.
- METRO has already developed a 2025 Build Alternative that includes light rail through the Inner Katy study area along one of the two high-capacity transit alignments identified above. From the Northwest Transit Center, the alignment travels east, past Eureka Yard, turning south near Yale, then east to Houston, tying into Capitol downtown as reflected in **Figure 2.6: 2025 Build Alternative - Light Rail**. Potential station locations were identified at the Northwest Transit Center, Shepherd/Durham, Yale/Heights, Sawyer, Lubbock, Bayou Place, and Capitol.
- METRO has developed a bus network to support the 2025 Build Alternative. Routes included in that plan are identified in **Table 2.12: METRO 2025 Build Inner Katy Bus Routes** (see Appendix).
- When compared to the route system that is currently in place, the 2025 Build Alternative discontinues or modifies some routes and adds new routes. Some of the new routes will provide local service in the Inner Katy area or will make stops at the Northwest Transit Center. Others will only pass through the area while traveling to their final destination (downtown, Uptown, etc.).

***Mode-Neutral** refers to the non-commitment of the Mobility 2025 Plan to a specific form of high-capacity transit (such as bus versus rail).*

Parking

- On-street parking is available at various commercial locations throughout the study area, as well as along most local residential streets.
- Many commercial areas also provide off-street surface parking lots for customers and employees. There are no known commercial parking structures within the study area, other than those associated with individual office buildings.
- Parking meters are used to regulate on-street parking and parking duration and turnover in high-traffic areas.

A summary of relevant City of Houston parking regulations and standards is included later in this chapter.

Pedestrian and Bike Circulation

Pedestrian walkways, sidewalks and crosswalks are part of the City's existing transportation system, serving the need for safe pedestrian movement in residential neighborhoods, commercial business areas, and around schools, parks and other community facilities. In recent years the City of Houston has also pursued the development and expansion of its trail network.

Within the study area are several corridors specifically designated by the City to accommodate bicycle traffic as an alternative mode of transportation (see **Figure 2.7: Bikeways** and **Table 2.13: Bikeway Segments** in the Appendix). These facilities include on-street striped bike lanes and signed routes as well as off-street paths, all of which have been funded as transportation enhancement projects through the federal Intermodal Surface Transportation Efficiency Act (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21). The projects were designed in accordance with guidelines established by the American Association of State Highway and Transportation Officials (AASHTO) and the Texas Department of Transportation (TxDOT).

Utility Infrastructure

Like transportation infrastructure, the necessary utility systems of water, wastewater and storm drainage must be of adequate size (capacity) and condition to accommodate current demand and future needs.

- As depicted in **Figure 2.8: Water Service** and **Figure 2.9: Storm and Wastewater Systems**, all developable portions of this central-city study area are already served by water delivery systems, wastewater collection lines, and storm drainage infrastructure constructed and maintained by the City of Houston.
- While flooding and floodplain management issues are discussed later in this chapter, it should be noted that major arterials and other curbed roadways within a relatively flat area such as Houston are intentionally designed to hold excess storm water temporarily during the most intensive storms until such drainage can be conveyed by area bayous and the storm sewer system.

As significant future public and private development proposals are considered for particular locations in the study area, closer inspection of each type of utility system should consider line size/capacity, condition, location and related factors to ensure infrastructure suitability. Should a trend emerge toward higher-density and more intensive land uses as part of a transit-oriented development transition, then "big picture" infrastructure considerations for the entire area will come into play.

Land Use

Land use is a fundamental consideration for the evaluation, feasibility, planning and implementation of any transportation project, particularly transit systems seeking to incorporate transit-oriented development concepts. For this element of the Existing Conditions assessment, data was assembled on the existing land use pattern and development trends in the study area, as well as areas experiencing significant changes in development type and intensity compared to historical practice. The evaluation of past, current and future land use focuses on those areas within proximity of the two potential high-capacity transit corridors as a foundation for the emergence of a transit-oriented Inner Katy corridor. The area's current land use mix and future development outlook are key inputs to the Alternative Development Scenarios explored in Chapter 5.

Existing Land Use

The City of Houston uses 11 land use categories to inventory existing land use patterns, including:

- single-family residential;
- multi-family residential;
- commercial;
- office;
- industrial;
- public/institutional;
- parks and open space;
- undeveloped;
- agricultural production;
- transportation/utilities rights of way; and,
- other (open water, etc.).

The most recent available land use data for the study area was compiled by the City of Houston Planning & Development Department in 2000. Additional field work was conducted for this study to incorporate significant land use changes since 2000. The results of this land use investigation and recent updates are displayed in **Figure 2.10: Existing Land Use** and presented in **Table 2.5: Existing Land Use Allocation**.

Single-Family Residential

- Definition: Single- and two-family dwellings, mobile homes.
- Map Color: Yellow.
- Single-family residential uses comprise the second-most dominant land use in the study area after parks and open space.
- While some single-family uses in the southeastern quadrant of the study area are in relatively poor condition, other single-family residential areas remain vibrant, with increasing property values and reinvestment.
- Most neighborhoods in the study area are anchored by churches, schools and/or other public facilities.

TABLE 2.5:
Existing Land Use Allocation

Land Use	Acres	% of Total
Single-Family Residential	1,247.0	17.3%
Multi-Family Residential	205.0	2.8%
Commercial	314.6	4.4%
Office	73.8	1.0%
Industrial	930.5	12.9%
Public/Institutional	290.8	4.0%
Transportation and Utilities	69.6	1.0%
Parks and Open Space	1,806.9	25.0%
Undeveloped	597.1	8.3%
Open Water	9.8	0.1%
Right-of-Way	1,662.6	23.0%
Uncoded (unknown)	14.7	0.2%
Total	**7,222.4**	**100.0%**

Source: City of Houston Planning & Development Department (2000)
Wilbur Smith Associates (2002 updates)

Multi-Family Residential

- Definition: Medium- to high-density residential dwellings, including condominiums, apartments, mobile home parks, dormitories, nursing and retirement homes, and boarding and rooming houses.
- Map Color: Orange.
- Multi-family residential uses comprise a relatively small share of the existing housing stock in the study area.
- Increasing property values are leading to an increase in multi-family residential activity, particularly along Memorial Drive, Washington Avenue and Heights Boulevard.

Commercial

- Definition: This broad category includes hotels, restaurants, general retail sales and services, and commercial recreation activities such as bowling alleys.
- Map Color: Red.
- Commercial activity is most prevalent along the Washington Avenue corridor, generally from Westcott east to Studemont, and especially in the vicinity of the Shepherd/Durham and Heights/Yale intersections. Commercial uses also extend northward from Washington to the Katy Freeway along Shepherd and Durham.
- A significant commercial node is located in the northern portion of the study area at the intersections of Shepherd/Durham and West 11th Street.

- Other notable commercial clusters are found along Houston Avenue near Washington Avenue and at the converging streets of North Main, Houston and Pecore at IH 45.
- A relatively new and significant commercial development at the western edge of the study area is the Marq-E entertainment complex along the north side of the Katy Freeway at Silber Road and Old Katy Road.

The Marq-E entertainment complex, a large-scale development on a former industrial site just outside Loop 610, is a significant new traffic generator and attractor for the area

Office

- Definition: Includes medical offices, banks, savings & loans, office buildings and office condominiums.
- Map Color: Pink.
- The most significant office development is found primarily along the Katy Freeway and Memorial Drive corridors, with minor clusters or concentrations at the West Loop-Katy Freeway interchange, the Waugh-Memorial Drive interchange, and near the Memorial-Westcott intersection.
- While there are several notable office clusters in terms of combined square footage and multi-story buildings, they are minimal relative to the City's major activity centers.

Industrial

- Definition: Uses that employ manufacturing, assembly or warehousing, including cold storage facilities, landfills, salvage and recycling facilities, and research and development enterprises.
- Map Color: Purple.
- Industrial activities are widely dispersed throughout the study area; however, two significant clusters are found along existing and former rail lines. One cluster is north of Washington, east of Studemont and south of White Oak Bayou. The other is in the northwest portion of the study area in the vicinity of Hempstead Road, Old Katy Road, and the West Loop.
- Many of the industrial uses encroach into single-family residential areas, are adjacent to other non-compatible uses, and/or are situated improperly along local streets.
- Much of the industrial landscape is historical in context and, in some cases, represents tremendous opportunity for "brownfield" redevelopment.

Public/Institutional

- Definition: Government offices, schools, churches, hospitals, fire and police stations, cultural facilities and abandoned exempt parcels.
- Map Color: Blue.
- Public and institutional uses are inventoried in more detail later in this section.

Transportation and Utilities

- Definition: This category includes private streets and parcels/facilities associated with the manufacture and distribution of water, gas, or electricity; rail facilities; communication facilities; and, bus/rail terminals.
- Map Color: Dark Purple.
- Transportation uses in the study area are generally associated with the existing transit operations of METRO. Such facilities represent opportunities to integrate transit-oriented development concepts.
- Transportation and utilities uses comprise a small proportion of overall land use in the study area but support land development/redevelopment through the provision of necessary urban infrastructure.

Parks and Open Space

- Definition: Includes public and private parks, country clubs, school parks, cemeteries and areas under the jurisdiction of the Harris County Flood Control (HCFC) District.
- Map Color: Green.
- Due to the presence of Memorial Park in the westernmost portion of the study area, parks and open space is the most prevalent land use.
- Much of the fringe area along Buffalo and White Oak bayous has been reserved as open space, and many such areas are complimented by both active and passive recreational characteristics.
- Few neighborhood-oriented parks are located within the predominately older neighborhoods.

Undeveloped

- Definition: Generally, vacant lands.
- Map Color: Gray.
- Undeveloped, or vacant, lands are more common south of the Katy Freeway where the land use pattern appears to be more transitional and more diverse; however, large vacant parcels are present in the northeast quadrant of the study area.

- Some of the undeveloped areas are linear in nature and represent abandoned rail/streetcar corridors.
- No agricultural production currently occurs in the study area.

Open Water

- Definition: Bayous, lakes and similar water features.
- Map Color: Light Blue.
- Although "water" represents a small proportion of the overall land use inventory, water – be it bayous or similar features – provides a unique component in the intensely urbanized study area.
- Many of the areas that border the bayous have been reserved as park and open space, providing relief and a positive balance in the area's urban mix.

General Development Pattern and Character

The long-term development pattern within the Inner Katy study area has been shaped by physical and environmental constraints, transportation corridors (including earlier train and streetcar lines), major landmarks, "*neighborhood unit*" development oriented around public facilities and parks, and later the combined influences of suburban-style building and an automobile-oriented society. Significant redevelopment activity in recent years, particularly in the form of higher-density townhouse and apartment development, is clearly changing the character of some neighborhoods within the area.

*A **neighborhood unit** is generally characterized by major thoroughfares that form a one-mile grid that results in neighborhoods that are roughly one square mile. Single-family residential development is the primary component of the neighborhood and is focused toward a centrally-located elementary school and/or park. Higher-density residential and commercial activities are located toward the edge of the neighborhood where streets are designed to handle more traffic.*

Nodes

Major development and activity nodes in or adjacent to the study area, defined as areas of common characteristics which serve as destinations and community focal points, include:

- Houston Central Business District.
- Major intersections along the Katy Freeway, Washington Avenue, Memorial Drive, 11th Street, Shepherd/Durham, Yale/Heights/Waugh, Studemont/Studewood, and Houston Avenue.
- The converging streets of North Main, Houston Avenue and Pecore at IH 45.
- Marq-E entertainment complex.

Some blocks in Inner Katy show the obvious signs of a changing housing market and transition in residential density and design

Edges

Several "edges" are associated with the study area, which involve physical or development features that define or separate geographic areas of the community. Such edge features include:

- Interstate highway corridors (IH 10, 45, 610).
- Rail corridors.
- Principal thoroughfares (e.g., Memorial Drive, 11th Street, Washington Avenue).
- Buffalo and White Oak bayous and associated parkland.
- Memorial Park.

Landmarks and Community/Public Facilities

A wealth of key landmarks are located within the study area consisting of various public facilities, schools, parks, and historic structures. Many of these landmarks serve valuable community functions and were developed or have evolved as neighborhood "building blocks" and anchors for complementary private development. Similar intermingling of transit-supportive public and private uses could be a prime strategy for future station areas, as explored further through the Alternative Development Scenarios in Chapter 5 and the Preferred Scenario and Implementation discussion in Chapter 7.

Various types of public and community facilities were inventoried based on data and information provided by the City of Houston and supplemented through other sources. Examples include health clinics, multi-service centers, public and private schools, parks and parkways, community centers, police and fire stations, libraries and post offices. The reason for documenting such facilities is to indicate the location and characteristics of sites that can attract and generate significant visitation and both vehicle and foot traffic. Enhanced accessibility to such facilities may be a transit development objective. The distribution and specific location of such facilities is illustrated in **Figure 2.11: Community and Public Facilities**, and a complete listing is included in the Appendix to this chapter.

Special Districts

Within the boundaries of the study area are several areas that can be defined as districts. Each was created to designate areas of opportunity, in which unique incentives are available to create jobs and spur economic activity and/or capital investment. The location and extent of several of the district types is illustrated in **Figure 2.12: Special Districts**. Later chapters in this study explore how best to spur redevelopment in Inner Katy, particularly in the Preferred Scenario and Implementation discussion in Chapter 7. The following information highlights ways in which the City of Houston is already using tools at its disposal to promote and target reinvestment activity while protecting valued neighborhoods and historic areas.

Tax Increment Reinvestment Zone (TIRZ)

- A variety of *Tax Increment Reinvestment Zone* districts have been created throughout the City of Houston, three of which are in the study area: Memorial Heights, Old Sixth Ward, and City Park.
- Each TIRZ was created to draw new investment to an underdeveloped or blighted area.
- Funds generated within the district may be used for public improvements in the zone, including street and utility re/construction, public facilities, and parks and recreation facilities.

*In a **Tax Increment Reinvestment Zone**, taxes on existing development continue to the General Revenue Fund while taxes resulting from new construction are earmarked to finance public improvements in the zone. Improvements may include street and utility re/construction, public facilities, and parks and recreation facilities.*

Texas Enterprise Zone (TEZ)

- The *Texas Enterprise Zone* within the Inner Katy study area encompasses a large area bounded by West 11th Street, Heights Boulevard, and Westcott. The southern boundary jogs from Memorial Drive to Feagan Street.
- According to the "Texas Enterprise Zone Annual Report – FY01," the TEZ is a State program created to encourage capital investment and job growth in economically distressed areas of Texas through the creation of public/private partnerships for "promotion of business expansion and revitalization."
- Local incentives may include tax abatements, tax increment financing, streamlined permitting, and development fee exceptions.
- To qualify for incentives, businesses must be located within a TEZ and commit at least 25 new jobs (created/retained) to enterprise zone residents or economically disadvantaged persons.
- State incentives are available to enterprise projects in the form of a refund of $2,000 for each new permanent job created or retained in state sales and use taxes paid on building materials, machinery and equipment, labor for rehabilitating a project, as well as electricity and natural gas.

***Texas Enterprise Zone** refers to districts created with state authorization to stimulate investment and job growth in economically distressed areas.*

Enhanced Enterprise Community (EEC)

- Much of the eastern portion of the study area is designated as an *Enhanced Enterprise Community* under the Federal Empowerment Zone/Enterprise Community (EZ/EC) program. As a result, this area is eligible for certain federal funds to stimulate economic development in the form of incentives, low-interest loans and other assistance.
- The EEC boundary is generally between Buffalo Bayou, Interstate 10, Interstate 45, and Yale Street, but also includes the Houston CBD and numerous surrounding neighborhoods.
- According to "Community Based Organization Toolbox," published by the City of Houston in the summer of 1999, the EZ/EC program was established in 1994 and will continue through 2004.

*An **Enhanced Enterprise Community** is a defined area where business activities conducted are eligible for federal, state and city benefits and incentive programs. An EEC is also recognized as a State Enterprise Zone.*

- The purpose of the EEC is to stimulate economic development and sustainable community development, form community-based partnerships, and create a strategic vision for change.
- Two loans are available through the Economic Development Initiative/Section 108 Loan Guarantee Program, each with a unique purpose. The Micro-Enterprise Loan Program can be used to finance new business start-ups and provide small business training and assistance as part of the marketing strategy to potential borrowers. The Small Business Loan Program provides financing to attract new businesses and encourage existing businesses to expand operations in the EEC.
- Funding is also available through the Special Economic Development Program that allows the City to participate in larger projects that are job intensive.

Neighborhoods to Standard (NTS) Areas

- Seven neighborhoods within the Inner Katy study area have been designated as NTS areas: Cottage Grove (Tier IV), Magnolia Grove (Tier II), Rice Military (Tier II), Sixth Ward (Tier I), Heights West (Tier II), Woodland Heights (Tier III), and West End and Proctor Plaza (Tier IV), which borders on East 11th Street.
- The NTS program, established under former Mayor Bob Lanier, focuses on neighborhoods with substandard infrastructure, facilities and/or services. The initiative seeks to enhance each area through an emphasis on improvement projects such as street overlays, better street lighting and the mitigation of derelict buildings.

Historic Districts

- Old Sixth Ward, generally bounded by Washington, Sawyer, Memorial and Colorado, is listed on the National Register of Historic Places and recognized by the City of Houston. This local designation permits the implementation of regulatory controls such as design guidelines.
- The Houston Heights area is not a municipally-designated historic district although 50 landmarks have been designated historic by the City of Houston. Currently the area is referred to as a Multiple Resource Area, but according to City of Houston officials, the community is interested in becoming a locally-recognized district. Traditionally, this National Park Service designation is for cities under 50,000 persons. But it would apply in this case because Houston Heights was incorporated separately in 1896 and later consolidated into the City of Houston in 1918. This designation recognizes that the Houston Heights area has 133 Nationally Historic Landmarks.

Environmental and Cultural Resources

Natural features offer opportunities for preservation and enhancement but may also present unavoidable obstacles to specific transit development proposals as well as significant private development in areas deemed "environmentally sensitive" (e.g., floodplains, "brownfields," near valued bayou corridors). Following is a summary of environmental features and assets in the study area. The positive and restrictive implications of these environmental factors are considered in greater detail in the Alternative Development Scenarios in Chapter 5, the Feasibility Analysis in Chapter 6, and the Preferred Scenario and Implementation discussion in Chapter 7.

Floodplains

Generally, floodplains are natural features of the landscape that are susceptible to periodic inundation. The Federal Emergency Management Agency (FEMA) defines the "100-year floodplain" as the area that has a one percent chance of being flooded in any given year. The emergence of the National Flood Insurance Program (NFIP) resulted in the development of Flood Insurance Rate Maps (FIRMs) that depict areas subject to specific flood events, specifically the 100- and 500-year floods. Areas most susceptible to flooding and high velocity floodwaters are identified as "floodways."

- In spite of two major waterways with well-known flooding problems that converge in the study area (Buffalo and White Oak bayous), the currently mapped floodplains are relatively confined to the channels and adjacent areas. These floodprone areas are depicted in **Figure 2.13: Floodplains**.
- Many areas of Houston suffered catastrophic losses from the heavy rains brought by Tropical Storm Allison in June 2001. Portions of the study area were heavily inundated by high water, but in general the Inner Katy area escaped the worst of the damage.
- FEMA is conducting a technologically sophisticated remapping of flood potential countywide that will result in a high quality map of the Special Flood Hazard Areas.
- Permits for development within the floodplain are administered by the City of Houston. Within the regulatory floodways, nearly all development is prohibited.
- Many areas along Buffalo and White Oak bayous are reserved open space maintained by the City of Houston and/or Harris County and encompass trails, maintained landscape areas, memorials, exercise facilities and miscellaneous park amenities (benches, playground equipment, etc.).
- Floodways in the study area encroach into some developed areas, offering opportunities for more sensitive redevelopment or conversion to open space.

- When floodplains are not reserved for open or green space, new and substantially improved structures should be elevated appropriately. Certain uses, particularly critical facilities such as hospitals, should not be located within a floodplain.

Urban Habitat

The Great Texas Coastal Birding Trail is a network of loops connecting documented birding sites along the entire Texas Gulf Coast region.

- The Buffalo Bayou Trail links six birding sites inside Loop 610, one of which is in the study area (site UTC 090). This site is located at White Oak Park.
- Sitings are generally associated with migratory species in the winter months. According to the Texas Parks & Wildlife Department, "Citizens in this community have cleaned portions of White Oak Bayou here, and in doing so restored a swamp where Yellow-Crowned Night Herons and Green Herons nest. A number of eastern woodland species reside in the park."
- Stude Park, also within the study area, may offer similar birding opportunities.

Air Quality Attainment Status

Non-Attainment Area *refers to an area designated by the EPA where air pollution levels persistently exceed national ambient air quality standards established under the federal Clean Air Act.*

Under the federal Clean Air Act, the Houston metropolitan region is considered a significant *non-attainment area*. Both the public and private sectors are implementing a variety of regulatory and non-regulatory strategies aimed at achieving compliance by the mandated deadline of 2007. Transit enhancements are an important part of the region's attainment strategy, although transit is not projected to contribute significant reductions in air pollutants relative to other efforts addressing vehicular, industrial and other "non-mobile" sources.

Historic Buildings and Resources

According to records maintained by the Texas Historical Commission, a vast inventory of historical resources is located within the study area that includes historic markers, structures on the National Register of Historic Places, and surveys of structures eligible for the Register. In addition, the area includes three recognized historic districts (described earlier in this chapter) with design standards enforced through the City of Houston. A complete listing of historic buildings and resources in the Inner Katy study area is included in the Appendix to this chapter.

Development Codes and Ordinances

Several elements of the City of Houston Code of Ordinances include policies and provisions aimed at influencing the character of new or substantially improved development. Such regulations could be useful in implementing TOD in the study area, though additional tools will be necessary. The specifics of potentially relevant code provisions are outlined in this chapter, and their implications for more transit-

supportive development outcomes are discussed in Chapter 7, Preferred Scenario and Implementation.

Buildings and Neighborhood Protection (Chapter 10)

Many neighborhoods within the study area rely on deed restrictions as a neighborhood protection tool due to Houston's lack of zoning. Though the City is not a party to deed restrictions, Section 10-3 of the Houston Code of Ordinances requires an affidavit of compliance with applicable deed restrictions prior to the issuance of a building permit.

Floodprone Areas (Chapter 19)

Chapter 19 of the City Code addresses issues associated with enforcement of various provisions of the National Flood Insurance Program (NFIP). It is in compliance with the minimum standards established by the Federal Emergency Management Agency (FEMA) and references applicable maps and studies used to delineate the floodplain and floodway. Development is highly restricted within the floodways of both Buffalo and White Oak bayous. Many of these areas are already reserved as dedicated open space. However, new bridges or significant improvements to existing ones will require substantial hydraulic and hydrologic analysis to demonstrate compliance with the provisions.

Off-Street Parking and Loading (Chapter 26)

Off-street parking and loading regulations apply under the following circumstances: new construction, building alterations, change in land use, change in occupancy class of a free-standing building, and/or specific use changes in neighborhood shopping centers.

- In parking areas with 40 or more parking spaces, up to 35 percent of the spaces may be designed and reserved for small or compact cars (Section 26-26). No compact spaces are permitted for buildings designed for residential use.
- Off-site parking is permitted, but at least 75 percent of the required parking spaces must be located on the site of the associated use (Section 26-27). Further, the off-site parking may be no more than 250 feet from a public entrance via a pedestrian path or walkway.
- Shared parking requirements may be applied to mixed use developments that consist of two or more distinguishable purposes, such as commercial/retail, hotel, office/industrial, restaurant, entertainment/recreation, and others. This provision utilizes a parking credit schedule to calculate parking requirements based on a variety of relevant factors.

Subdivisions, Developments and Platting (Chapter 42)

Chapter 42 is the source of requirements and standards that enable the City of Houston to regulate typical elements of residential and non-residential development.

Many of its provisions are potentially relevant to encouraging transit-oriented development nodes or patterns within the Inner Katy area and elsewhere.

"Urban" versus "Suburban" Classification

Chapter 42 establishes a process for designating areas within the city as "*urban areas*" (Section 42-101). The Inner Katy study area is among the central city areas for which this section was intended. The designation involves criteria such as being bound by "defining physical features" (major thoroughfares, railroad or major utility corridors, waterways, etc.); significant developed property (80 percent of parcels exclusive of parks and open space); dedicated residential use (25 percent); significant nonresidential activity (30 percent); average density in single family residential development of five or more units per acre (exclusive of public street rights of way); and, limited distance between intersections (25 percent of streets spaced no more than 1000 feet apart).

*"**Urban Area** shall mean the area included within and bounded by Interstate Highway 610 and any other area within the city so designated by the city council pursuant to section 42-101 of this Code."*

City of Houston
Code of Ordinances,
Chapter 42,
Section 42-1,
Definitions

Street Width

Section 42-122 of the chapter establishes the City's minimum width requirements for street rights of way in conjunction with the Major Thoroughfare and Freeway Plan. The next section provides for "street width exception areas," particularly in older sections of the City, including various areas specified within the Inner Katy study area.

Building Placement

Minimum building line requirements are established in Section 42-150, including certain variations between "urban areas" and "suburban areas" depending on the property location and type of abutting street. The next section authorizes the Planning Commission, after public hearing, to exempt other areas besides the CBD from building line requirements based on maximum blockface length (300 feet), minimum right of way width (80 feet), and levels of vehicular traffic similar to CBD conditions. Two other sections (42-154 and -155) outline procedures for reducing building line requirements – down to zero, in some cases – along major thoroughfares with constrained rights of way (80 feet). These sections apply in certain urban area situations where specific standards can be met. Particularly for retail commercial centers, the standards provide a framework for "pulling" buildings closer to the street (subject to height limitations), placing off-street parking areas to the rear or side of buildings, ensuring sidewalks or landscaping along the frontage, and limiting driveways.

Section 42-159 sets building line standards along collector and local streets in urban areas. The standards are intended to "foster a design framework applicable to urban areas that differ in character from each other and from suburban areas." A specific aim of this section is to maintain unobstructed sidewalks for pedestrian use by requiring greater setbacks for garages and carports facing the street. The front building line requirement can be reduced in certain cases if vehicular access is only from the rear (such as through an alley), if an adequate common parking area is available, or if shared driveways are provided.

Section 42-163 focuses on establishing prevailing building lines "to preserve the character of existing blockfaces in residential neighborhoods in urban areas that do not have building lines established by deed restrictions." A procedure is established for creating "special building line requirement areas" for 20 years. In such areas, the special requirement prevails over any more lenient building line requirement allowed under Chapter 42. In addition, a special building line requirement cannot be greater than the prevailing building line of the blockface.

Density

Section 42-183 sets minimum lot size requirements for single family residential development in urban areas. Where wastewater collection service is available, the minimum lot size is 3,500 square feet. This minimum can be reduced to as low as 1,400 square feet if certain standards can be met. The standards involve building coverage, minimum *permeable* area on the lot, adequate wastewater service, and a maximum density of 27 single family dwelling units to the gross acre of all land within the platted subdivision. This density limit was one of the most contentious aspects of Chapter 42 when it was adopted in 1999. Section 42-230 provides for review of the proposed dwelling unit density and layout in multi-family residential developments without setting a specific density limit.

***Permeable** refers to surfaces through which water can pass and penetrate into the ground. Most paved surfaces and areas covered by structures are considered impermeable.*

Section 42-184 provides for reduction in lot sizes below minimum requirements when compensating open space is set aside within a platted subdivision. Such trade-offs are subject to certain rules and standards for the designated open space. A schedule is also provided by which the required open space per lot increases as the average lot size decreases (to a maximum of 600 square feet of open space for urban area subdivisions where average lot size is less than 2,000 square feet).

Similar to Section 42-163 regarding prevailing building lines, which was adopted in 1999, the City in December 2001 authorized a procedure allowing neighborhoods to petition to establish prevailing lot sizes. This process is outlined in Section 42-213. It requires residents of a block face (properties along one side of a street), an entire block, or a group of contiguous blocks to request that the most common lot size in the area be designated as the prevailing lot size. If the petitioning area is deemed eligible and a prevailing lot size is established, then any lots created from then on can be larger but no smaller than the new minimum standard. Neighborhood advocates welcomed the lot size provision as another way to help protect established, predominantly single-family residential areas from encroachment by higher-density housing types like townhouses and lofts. The Woodland Heights neighborhood in the northwest part of the Inner Katy study area was among the first to submit prevailing lot size petitions, wishing to preserve much of the original cottage and bungalow housing from the early 1900s. Other areas of the Heights have been among the most enthusiastic beneficiaries of the lot size provision, hoping to maintain the desired development character and historic charm of local neighborhoods. Like the prevailing building lines established through Section 42-163, each "special minimum lot size area" is authorized for a 20-year period.

Section 42-236 defines open space requirements for multi-family residential developments. The section also offers ways to meet or reduce the open space standards through provision of street trees or sidewalks in targeted locations.

Section 42-186 establishes a uniform minimum lot width of 20 feet. Section 42-188 sets width requirements and other parameters for "*flag lots*."

***Flag lots** are lots typically situated away from a street behind one or more other lots, with frontage on and access to the street right of way via a narrow driveway, an access easement or another parcel referred to as the "staff" of the flag lot.*

Residential Parking and Streets

Section 42-187 requires that every platted lot for single family residential use include at least two off-street parking spaces. If a secondary dwelling unit of 900 square feet or less is included, then only one additional off-street parking space must be provided for the accessory unit. Section 42-234 sets parking requirements for multi-family residential developments, reaching two required spaces per unit when three or more bedrooms are included.

Finally, for purposes of authorizing cul-de-sac streets in residential areas, Section 42-131 assumes that detached dwelling units typically generate 10 vehicle trips per day while attached units generate eight trips per day.

The implications of these provisions of Chapter 42, along with other relevant City Code sections, are an important consideration in the Inner Katy Transit-Oriented Development Study. The absence of zoning in Houston, and possible regulatory gaps related to other urban development issues, provides an interesting backdrop for exploring transit-oriented development potential in the nation's fourth-largest city.

APPENDIX: Additional Data and Inventories

TABLE 2.6:
Street Classifications, Number of Lanes and Right of Way

Street	Segment	Classification
Crockett	Sawyer to Houston	C-4-70
	Houston to North Fwy	C-4-70
Durham	N. Shepherd to Washington	P-4-60
	Washington to Katy Fwy	P-4-70
	Katy Fwy to 11th St	P-4-60
Hempstead	MKTRR to W. 11th St	P-6-100
Heights Blvd	Waugh to Washington	T-4-140
	Washington to Katy Fwy	T-4-180
	Katy Fwy to White Oak	T-4-150
	White Oak to E. 11th St	T-4-150
Hogan	North Fwy to N. Main	C-4-60
Houston	Memorial to Washington	T-6-160
	Washington to Crockett	T-6-100
	Crockett to White Oak	T-4-60
	White Oak to N. Main	T-4-60
Katy Road	Washington to N. Post Oak	T-4-100
Main, N.	Hogan to IH-10	T-4-70
Memorial	IH-45 to Houston	P-4-110
	Houston to Studemont	P-6-110
	Studemont to Heights Blvd (Waugh)	P-6-100
	Heights Blvd (Waugh) to Shepherd	P-6-100
	Shepherd to Detering	P-6-100
	Detering to Wescott	P-6-120
	Westcott to Woodway	P-6-100
	Woodway to West Loop	T-4-210
Pecore	N. Main to Michaux	C-2-60
Post Oak Road, N.	Westview to Katy Fwy	T-4-80
Sawyer	Memorial to Washington	C-4-60
	Washington to Crockett	C-4-60
	Crockett to White Oak	C-4-60
Shepherd	W. Dallas to Durham	P-6-100
	Durham to Washington	P-4-60
	Washington to Katy Fwy	P-4-60
Shepherd, N.	Katy Fwy to W. 11th St	P-4-60
Silber	Katy Fwy to Westview	C-4-80
Studemont	Memorial to Washington	T-6-100
	Washington Ave to Katy Fwy	T-6-100
	Katy Fwy to White Oak	T-4-85

TABLE 2.6 (Continued):
Street Classifications, Number of Lanes and Right of Way

Street	Segment	Classification
Studewood	White Oak to E. 11th St	T-3-80
T.C. Jester	Washington Ave to Katy Fwy	T-4-100
	Katy Fwy to W. 11th St	T-4-110
Washington	Franklin to Houston	T-4-70
	Houston to Studemont	T-4-80
	Studemont to Yale	T-4-80
	Yale to Shepherd	T-4-70
	Shepherd to TC Jester	T-4-70
	TC Jester to Westcott	T-4-70
	Westcott to Katy Fwy	T-4-70
	Katy Fwy to MKT RR	P-8-120
Westcott	Memorial to Washington	P-6-100
	Washington Ave to Katy Fwy	P-5-159
White Oak	North Fwy to Houston	T-2-70
	Houston to Studewood	T-2-70
	Studewood to Yale	T-2-60
Yale	Washington Ave to Katy Fwy	T-4-70
	Katy Fwy to White Oak	T-4-70
	White Oak to W. 11th St	T-4-70
11th, E	Michaux to Studewood	C-4-70
	Studewood to Heights	T-4-70
	Heights to Yale	T-4-70
11th, W	Yale to N. Shepherd	T-4-70
	N. Shepherd to W. TC Jester	T-4-70
	W. TC Jester to Ella	T-4-100
	Ella to Hempstead	T-4-100

Source: 2001 Major Thoroughfare and Freeway Plan, Street Hierarchy Classification Table, City of Houston Planning & Development Department

P = Principal Thoroughfare

T = Thoroughfare

C = Collector

Middle Number = Number of Traffic Lanes (current or future)

Last Number = Right of Way Width (current or future)

TABLE 2.7:
Traffic Volumes

Street Name	From	To	Location of Count	Date of Count	Volume	Direction
Crockett	North Fwy	Houston	E of Houston	3/4/1999	6,732	E & W
Crockett	Houston	Sawyer	W of Houston Ave.	3/4/1999	3,946	E & W
Durham	Washington	Katy Fwy	S of Katy Fwy	6/22/1998	16,116	S
Durham	Shepherd	Washington	S of Washington	6/22/1998	15,404	S
Durham N	Katy Fwy	W 11th	S of W 11th	6/22/1998	20,091	S
Heights Blvd.	Waugh	Washington	N of Feagan	3/9/1999	13,985	N & S
Heights Blvd.	White Oak Dr	E 11th	S of W 11th	3/8/2009	12,889	N & S
Heights Blvd.	Washington	Katy Fwy	S of Katy Fwy	3/8/1999	11,186	N & S
Hempstead	Washington	W 11th	S of W 11th	7/9/1998	14,859	N & S
Houston	Memorial	Washington	S of Washington	4/8/1999	20,759	N & S
Houston	Washington	Crockett	S of Crockett	4/8/1999	14,509	N & S
Houston	Crockett	White Oak	At White Oak Bayou	4/8/1999	12,651	N & S
Houston	White Oak Dr	N Main	S of Main	4/8/1999	7,536	N & S
Memorial	Shepherd	Westcott	E of Birdsall	5/12/1998	106,724	E & W
Memorial	Westcott	Woodway	E of Woodway	5/11/1998	93,497	E & W
Memorial	Houston	Waugh	E of Waugh	5/11/1998	76,650	E & W
Memorial	Waugh	Shepherd	E of Shepherd	5/11/1998	72,861	E & W
Memorial	Woodway	West Loop North	E of W Loop N	4/24/1998	14,352	E & W
N. Post Oak	Katy Fwy	Westview	N of Old Katy Road	6/19/1998	14,040	N & S
Old Katy Road	Washington	West Loop North	E of W Loop N	3/15/1999	14,186	E & W
Old Katy Road	West Loop N	N Post Oak	W of W Loop N	3/15/1999	9,651	E & W
Pecore	N Main	Michaux	E of Watson	6/7/1999	6,056	E & W
Sawyer	Katy Fwy	Washington	S of Crockett	7/13/1999	5,656	N & S
Sawyer	Washington	Memorial	S of Washington	7/12/1999	3,166	N & S
Shepherd	Durham	Washington	S of Washington	7/6/1998	17,992	N
Shepherd	Washington	Katy Fwy	S of Katy Fwy	7/6/1998	16,504	N
Shepherd N	Katy Fwy	W 11th	S of W 11th	7/6/1998	10,745	N
Shepherd S	Durham	W Dallas	At Buffalo Bayou Underpass	7/8/1998	36,419	N & S
Shepherd S	Durham	W Dallas	At Buffalo Bayou Underpass	7/9/1998	33,294	N & S
Silber	Katy Fwy	Westview	N of Shavelson	8/13/1998	15,756	N & S
Studemont	Allen Parkway	Washington	At Buffalo Bayou	7/8/1999	26,649	N & S
Studemont	Washington	Katy Fwy	N of Center	7/8/1999	25,719	N & S
Studewood	Katy Fwy	White Oak	At White Oak Bayou	7/20/1999	16,502	N & S

TABLE 2.7 (Continued):
Traffic Volumes

Street Name	From	To	Location of Count	Date of Count	Volume	Direction
Studewood	White Oak Dr	E 11th	N of White Oak Dr.	7/19/1999	12,553	N & S
TC Jester	Katy Fwy	W 11th	S of W 11th	5/17/1999	14,424	N & S
TC Jester	Washington	Katy Fwy	N of Washington	5/17/1999	7,826	N & S
Washington	Katy Fwy	Hempstead	N of Katy Road	5/17/1999	27,691	N & S
Washington	Sawyer	Studemont	W of Sawyer	5/10/1999	14,858	E & W
Washington	Shepherd	TC Jester	W of Durham	5/10/1999	14,766	E & W
Washington	Yale	Shepherd	W of Yale	5/10/1999	14,247	E & W
Washington	Studemont	Yale	E of Heights Blvd.	5/10/1999	13,676	E & W
Washington	Houston	Sawyer	E of Sawyer	5/10/1999	13,214	E & W
Washington	Franklin	Houston	E of Houston	5/10/1999	11,459	E & W
Washington	Westcott	Katy Fwy	N of Arnot	5/10/1999	10,099	N
Waugh	Heights Blvd	Allen Parkway	At Buffalo Bayou	7/23/1998	25,806	N & S
Waugh	Washington	Heights Blvd	N of Feagan	7/20/1998	3,977	S
Westcott	Memorial	Washington	N of Memorial	5/17/1999	11,505	N & S
Westcott	Washington	Katy Fwy	N of Arnot	5/17/1999	8,674	S
White Oak Drive	North Fwy	Studewood	W of Houston Ave.	5/24/1999	5,623	E & W

Source: Traffic Management & Maintenance Branch,
City of Houston Public Works & Engineering Department

METRO Bus Route Descriptions

- **17 Tanglewood –** Route 17 connects downtown with the Tanglewood area of Houston. The route travels through the Inner Katy study area via Memorial Drive. The route is interlined with the 17 Gulfton route that serves the Gulfton area in southwest Houston.
- **20 Long Point –** Route 20 connects downtown with the Long Point area of west Houston. The route travels through the Inner Katy study area via IH 10/Katy Freeway and Old Katy Road. The route is interlined with the 20 Canal route that serves the Magnolia Transit Center.
- **26/27 Inner/Outer Loop –** Route 26/27 provides crosstown loop service within the IH 610 Loop. The route travels through the Inner Katy study area via Shepherd Drive.
- **33 Post Oak –** Route 33 provides crosstown service connecting the Northwest Transit Center, Uptown/Galleria area, Bellaire Transit Center, Hiram Clarke Transit Center, and Ridgemont area. The route travels through the Inner Katy study area via Post Oak Road.
- **34 Montrose –** Route 34 connects the Heights Transit Center with the Texas Medical Center area. The route travels through the Inner Katy study area via Studewood, White Oak, and Waugh.
- **36 Kempwood –** Route 36 connects downtown with the Kempwood area and the West Little York Park and Ride (P&R). The route travels through the Inner Katy study area via Washington and Old Katy Road. The route is interlined with the 36 Lawndale route.
- **37 El Sol –** Route 37 provides crosstown service connecting the Manchester Dock and Magnolia Transit Center areas with areas to the north and west of downtown. The route travels through the Inner Katy study area via Crockett and Houston Avenue.
- **40 Pecore –** Route 40 connects downtown with the Northwest Transit Center. The route travels through the Inner Katy study area via Houston Avenue, Bayland, Watson, Pecore, W 11th, and Post Oak Road. The route is interlined with the 40 Telephone route that serves portions of southeast Houston.
- **43 Pinemont Plaza –** Route 43 connects the Northwest Transit Center with the Acres Home Transit Center area. The route travels through the Inner Katy study area via IH 10/Katy Freeway Service Road and Silber Road.
- **48 West Dallas –** Route 48 connects downtown with the Northwest Mall area. The route travels through the Inner Katy study area via Shepherd Dr, Feagan, Westcott, Washington, TC Jester, Larkin, Sherwin, Kansas, and Hempstead Road. The route is interlined with the 48 Navigation route that serves areas north and south of the Houston Ship Channel.

- **50 Heights –** Route 50 connects downtown with northwest Houston. The route travels through the Inner Katy study area via Memorial, Sawyer, Washington, and Heights Blvd. The route is interlined with the 50 Harrisburg route that serves the Magnolia Transit Center and Hobby Airport.
- **58 Hammerly –** Route 58 connects downtown with the Hammerly and Gessner area of northwest Houston. The route travels through the Inner Katy study area via IH 10/Katy Freeway, Hempstead Road, and Post Oak Road.
- **65 Yale –** Route 65 connects downtown with the North Shepherd area. The route travels through the Inner Katy study area via Crockett, Usener, and Studewood. The route is interlined with the 65 Bissonnet route that serves Westwood P&R area.
- **70 Memorial –** Route 70 connects downtown with the Memorial City area. The route travels through the Inner Katy study area via Memorial Drive. The route is interlined with the 70 University route that serves Rice University and to the south of Rice University.
- **72 Westview –** Route 72 connects the Northwest Transit Center and the Memorial City area. The route travels through the Inner Katy study area via Old Katy Road and Silber Road.
- **85 Antoine –** Route 85 connects downtown with the SH 249 Tomball Parkway area. The route travels through the Inner Katy study area via IH 10/Katy Freeway, Washington, Old Katy Road, and Post Oak Road.
- **93 Northwest/Greenway Shuttle –** Route 93 connects Greenway Plaza with the Northwest Transit Center. The route travels through the Inner Katy study area via Post Oak Road.
- **131 Memorial Express –** Route 131 provides express service between downtown, Memorial City, and the Addicks P&R. The route travels through the Inner Katy study area via IH 10/Katy Freeway, with a stop at the Northwest Transit Center.
- **210 West Belt Park & Ride –** Route 210 connects downtown with the Katy/West Belt P&R. The route passes through the Inner Katy study area via the IH 10/Katy Freeway.
- **214 Northwest Station P&R –** Route 210 connects downtown with the Northwest Station P&R. The route travels through the Inner Katy study area via IH 10/Katy Freeway and Old Katy Road, with a stop at the Northwest Transit Center.
- **216 West Little York/Pinemont P&R –** Route 216 connects downtown with the Pinemont, West Little York, and Northwest Station P&R lots. The route travels through the Inner Katy study area via IH 10/Katy Freeway and Old Katy Road, with a stop at the Northwest Transit Center.
- **221 Kingsland P&R –** Route 221 connects downtown with the Addicks and Kingsland P&R lots. The route passes through the Inner Katy study area via the IH 10/Katy Freeway.

- **228 Addicks P&R –** Route 228 connects downtown with the Addicks and Kingsland P&R lots. The route passes through the Inner Katy study area via the IH 10/Katy Freeway.
- **285 Uptown/Post Oak –** Route 285 connects the Uptown/Post Oak area with the Addicks and Kingsland P&R lots. The route travels through the Inner Katy study area via Post Oak Road, with a stop at the Northwest Transit Center.
- **298 Addicks/TMC P&R –** Route 298 connects the Texas Medical Center with the Addicks P&R. The route travels through the Inner Katy study area via IH 10/Katy Freeway, with a stop at the Northwest Transit Center.
- **455 Trolley E –** Trolley route E provides circulation service in the downtown area. The route also travels through the Inner Katy study area along Houston Avenue.

TABLE 2.8:
Span of METRO Bus Service on Typical Weekday

Route	Span of Service
Local	
17 Tanglewood	6:00 AM – 7:00 PM
20 Long Point	4:45 AM – 12:00 AM
26/27 Inner/Outer Loop	6:00 AM – 8:30 PM
33 Post Oak	4:45 AM – 11:00 PM
34 Montrose	6:30 AM – 7:30 PM
36 Kempwood	6:00 AM – 9:15 PM
37 El Sol	8:15 AM – 8:30 PM
40 Pecore	4:45 AM – 10:15 PM
43 Pinemont Plaza	6:00 AM – 12:00 AM
48 West Dallas	5:15 AM – 11:30 PM
50 Heights	5:00 AM – 12:00 AM
58 Hammerly	6:00 AM – 8:30 PM
65 Yale	6:15 AM – 1:30 AM
70 Memorial	6:00 AM – 8:15 PM
72 Westview	5:30 AM – 10:15 PM
85 Antoine Ltd	5:30 AM – 12:00 AM
93 NWTC-Greenway Plaza Shuttle	6:00 AM – 7:15 PM
Express	
131 Memorial Express	5:30 AM – 10:30 PM
Commuter	
210 West Belt P&R	Pass through only
214 Northwest Station P&R	5:15 AM – 10:00 PM
216 Pinemont/West Little York P&R	5:45 AM – 10:00 PM
221 Kingsland P&R	Pass through only
228 Addicks P&R	Pass through only
285 Uptown Post Oak/Greenway	6:00 AM – 6:30 PM
298 Addicks-NWTC_TMC	5:30 AM – 7:30 PM
455 Trolley E	6:30 AM– 7:30 PM

Source: METRO route schedules

TABLE 2.9:
Headway and Maximum METRO Buses in Service

Route	Headway		Max Buses in Service
	AM Peak	PM Peak	
Local			
17 Tanglewood	19	18	13
20 Long Point	17	16	15
26/27 Inner / Outer Loop	17	17	19
33 Post Oak	12	14	17
34 Montrose	26	33	4
36 Kempwood	16	15	14
37 El Sol	35	35	4
40 Pecore	13	12	21
43 Pinemont Plaza	30	33	5
48 West Dallas	34	30	6
50 Heights	11	11	23
58 Hammerly	20	22	8
65 Yale	12	14	33
70 Memorial	26	30	5
72 Westview	21	20	4
85 Antoine Ltd	13	13	3
93 NWTC-Greenway Plaza Shuttle	19	20	4
Express			
131 Memorial Express	14	14	19
Commuter			
210 West Belt P&R	17	21	5
214 Northwest Station P&R	23	9	21
216 Pinemont / West Little York P&R	10	10	11
221 Kingsland P&R	7	10	19
228 Addicks P&R	6	8	21
285 Uptown Post Oak/Greenway	22	23	8
298 Addicks-NWTC-TMC	13	15	9
455 Trolley E	10	10	4

Source: METRO Weekday Summary of Schedules

TABLE 2.10:
METRO Bus Fares

Fare	Adult	Discount	Youth
Local			
Cash	$1.00	$0.40	$0.25
Tokens (10)	$8.00	n/a	n/a
Transfers	Free	Free	Free
Day Pass	$2.00	$0.80	$0.50
Weekly Pass	$9.00	$4.50	$2.70
Monthly Pass	$35.00	$15.00	$9.00
Annual Pass	$315.00	$52.00	$52.00
Commuter			
Zone 1 Cash	$1.50	$0.60	$0.35
Zone 1 Monthly Pass	$50.00	$21.15	$12.65
Zone 1 Annual Pass	$459.00	$52.00	$52.00
Zone 2 Cash	$2.50	$1.10	$0.65
Zone 2 Monthly Pass	$78.00	$36.95	$22.15
Zone 2 Annual Pass	$702.00	$52.00	$52.00
Zone 3 Cash	$3.00	$1.25	$0.75
Zone 3 Monthly Pass	$94.00	$42.85	$25.70
Zone 3 Annual Pass	$846.00	$52.00	$52.00
Zone 4 Cash	$3.50	$1.45	$0.85
Zone 4 Monthly Pass	$110.00	$48.70	$29.20
Zone 4 Annual Pass	$990.00	$52.00	$52.00

Source: METRO Shortcut Guide

TABLE 2.11:
METRO Route Ridership

Route	FY97	FY98	FY99	FY00	FY01	5 Year Change
Local						
17 Tanglewood	889	1016	1033	963	950	6.9%
20 Long Point	3907	4214	4175	4145	3858	-1.3%
26/27 Inner/Outer Loop	6233	6665	6894	6690	7050	13.1%
33 Post Oak	6374	6870	6888	6934	6814	6.9%
34 Montrose	993	959	1011	885	898	-9.6%
36 Kempwood	2510	2597	2680	2543	2484	-1.0%
37 El Sol	1073	1198	1318	1290	1204	12.2%
40 Pecore	3310	3347	3594	3350	3174	-4.1%
43 Pinemont Plaza	n/a	n/a	n/a	919	837	-8.9%
48 West Dallas	1004	1148	1079	956	947	-5.7%
50 Heights	4350	4580	4876	4680	4554	4.7%
58 Hammerly	1012	979	1154	1132	1097	8.4%
65 Yale	3966	4610	4402	4551	4533	14.3%
70 Memorial	794	744	826	774	712	-10.3%
72 Westview	1680	1691	1742	1546	1470	-12.5%
85 Antoine Ltd	4538	4917	5351	5105	5012	10.4%
93 NWTC-Greenway Plaza Shuttle	299	674	638	266	280	-6.4%
455 Trolley E	n/a	n/a	n/a	1079	1186	9.9%
Local Subtotal	**42,932**	**46,209**	**47,661**	**47,808**	**47,060**	**9.6%**
Express						
131 Memorial Express	2252	2634	2805	2794	2539	12.7%
Express Subtotal	**2,252**	**2,634**	**2,805**	**2,794**	**2,539**	**12.7%**
Commuter						
210 West Belt P&R	271	272	302	265	309	14.0%
214 Northwest Station P&R	2482	2631	2969	3260	3533	42.3%
216 Pinemont-W. Little York P&R	571	686	813	978	1264	121.4%
221 Kingsland P&R	1055	1174	1413	1547	1837	74.1%
228 Addicks P&R	2298	2486	2824	2977	3050	32.7%
285 Uptown Post Oak-Greenway	358	376	373	409	400	11.7%
298 Addicks-NWTC-TMC	n/a	n/a	n/a	191	415	117.3%
Commuter Subtotal	**7,035**	**7,625**	**8,694**	**9,327**	**10,808**	**53.6%**
TOTAL	**52,219**	**56,468**	**59,160**	**60,229**	**60,407**	**15.7%**

Source: METRO

TABLE 2.12:
METRO 2025 Build Inner Katy Bus Routes

Route
20 Long Point
33 Post Oak Crosstown
34 Montrose Crosstown
36 Lawndale
37 El Sol
40 Pecore
48 West Dallas
58 Hammerly
72 Westview
85 Antoine Ltd
90 Yale
131 Memorial Express
210 West Belt P&R
214 Northwest Station P&R
216 Pinemont / West Little York P&R
219 Barker-Cypress P&R
221 Kingsland P&R
228 Addicks P&R
285 (295) Addicks-NWTC P&R
443 TC Jester Ltd
455 Trolley E
505 Fairfield P&R
561 Spring-Uptown P&R
562 Stuebner-Uptown P&R
569 Pinemont-West Little York-Uptown P&R
570 Northwest Station-Uptown P&R
573 Louetta-Uptown P&R
580 West Belt-Uptown P&R
801 Shepherd Crosstown
805 Quitman Crosstown
809 Katy P&R

Source: METRO

TABLE 2.13:
Bikeway Segments by Type

Street Name	Limits	Description	Length (Miles)
Heights Blvd.	W. 20th Street to Washington	Striped bike lanes	2.20
N. Post Oak Lane	IH-10 to Westview	Striped bike lanes	0.60
Washington	Franklin/Preston to Yale/Waugh	Striped bike lanes	1.85
Waugh	Washington to Feagan	Striped bike lanes	1.00
Bayland	Michaux to Houston	Signed bike route	0.70
Blossom	Crestwood to Westcott	Signed bike route	0.28
Crestwood	Memorial Trail to Blossom	Signed bike route	0.26
Houston	Bayland to White Oak Drive	Signed bike route	0.50
Michaux	Pecore to Bayland	Signed bike route	0.50
N. Post Oak Lane	Memorial Drive to Oakford	Signed bike route	0.30
N. Post Oak Lane	Oakford to IH-10	Signed bike route	0.50
Oakford	N. Post Oak Ln. to N. Post Oak	Signed bike route	0.10
Picnic Lane	Woodway Trail to Memorial Trail	Signed bike route	0.25
Heights Blvd.	Washington to Feagan	Southbound bike lane on west side of street	0.30
N. Post Oak Lane	Woodway to Memorial Drive	Future signed bike route (outside lanes shared with cars and bikes)	0.60
MKT Rails-to-Trails	Durham to IH 45	10' shared use path adjacent to 7th Street, across Studewood and IH 10, and adjacent to Spring Street	2.80
West Loop 610 Trail	Uptown Park Blvd. to Woodway	10' shared use path	0.60
Memorial Trail	Picnic Lane to Crestwood	10' shared use path	0.70
Woodway Trail	N. Post Oak Ln. to Picnic Lane	10' shared use path	1.00

Source: Wilbur Smith Associates

Community and Public Facilities

Health Facilities

- There are no hospitals in the study area
- West End Multi-Service Center, 170 Heights Boulevard (19,000 square feet)
- West End Health Center, 190 Heights Blvd (30,247 square feet)
- Thomas Street Clinic, 2015 Thomas
- Dental Center, 1612 Fannin

Schools

- The study area is within the Houston Independent School District (except for the small portion outside Loop 610 that is in Spring Branch ISD) and includes numerous public education facilities
- The Awty International School (Private), 7455 Awty School Lane
- Brock Elementary School, 1417 Houston Avenue
- Crittenden Center, 5107 Scotland
- Crockett Elementary School, 2112 Crockett
- Eighth Avenue Elementary, 727 Waverly
- Harper High School, 3203 Center
- Harvard Elementary School, 810 Harvard
- Hogg Middle School, 1100 Merrill
- Law Enforcement/Criminal Justice High School, 4701 Dickson
- Lee Elementary, 2101 South
- Memorial Elementary School, 6401 Arnot
- Milam Elementary School, 100 Roy
- St. Thomas High School (Private), 4500 Memorial Drive
- Stevenson Elementary School, 5410 Cornish
- Travis Elementary School, 3311 Beauchamp

Parks

- Buffalo Bayou Park, Allen Parkway/Memorial Drive
- Camp Logan Triangle Park, 6401 Coppage/Rodrigo
- Clements Raceway Park, 5100 Memorial Drive

- Cleveland Park, 200 Jackson Hill
- Cottage Grove Park, 2100 Arabelle
- Donovan Park/The Heights Playground, 7th Street/Heights Boulevard (privately maintained - Houston Heights Association)
- Dow Elementary Park (Lease), 1919 Kane
- Heights Boulevard Park, 100-1900 Heights Boulevard
- Hogg Bird Sanctuary Park, 100 Westcott
- Randall Jones Park, 1709 Bingham
- Nellie Keyes Park, 801 Lester
- Knox Park, 229 S. Heights Boulevard
- Lawrence Park, 725 Lawrence
- Ley Plaza Park, 1900 White Oak Drive
- Linear Park (Sesquicentennial Park), Sabine Street
- Memorial Park, 6501 Memorial Drive
- Memorial - Silver Triangle Park, 1901 Memorial Way
- Minola Park, 6415 Taggart/Minola
- Sawyer Triangle Park, 901 Sawyer
- Spotts Park, 401 S. Heights Boulevard
- Stude Park, 1030 Stude
- Studemont Spaceway Park, 800 Studemont
- Summer Street Park, 1600 Summer Street
- Wanita Triangle Park, 6600 Wanita
- West End Park, 1418 Patterson
- White Oak Parkway, 1513 White Oak Drive
- Woodland Park, 212 Parkview

Parks to Standard Program

Through this initiative, a broad range of improvements were completed in Phase I and additional improvements completed more recently in Phase II, including:

- Cleveland Park: landscaping, walks, picnic facilities, ballfield improvements, tennis court work, lighting and trail (Phase I, February 1998, $339,000).
- Dow Elementary Park: paving repair, picnic facilities, playground, security lighting, and landscaping (Phase I, December 1999, $150,000).

- Lawrence Park: renovation of parking lot and multi-use pavilion, landscaping, walks, picnic facilities, ballfields, and security lights (Phase 1, May 1997, $418,000).
- Memorial Park (Phase I): new playground and minor tennis center repairs and renovations (Fall 1997); jogging trail granite overlay and 18 park benches (Summer 1997), and additional granite overlay (Summer 2000); golf course lighting upgrades (September 1997); port-a-can screens (January 1998); Bush Presidential Grove (October 1996); 911 phones and security lighting (pending city-wide contract approval).
- Memorial Park golf course renovation ($4.5 million) and maintenance facility ($1.2 million).
- Cottage Grove: ballfield lighting and storage building (Phase II, Fall 2000, $253,000).
- Stude Park: ballfield improvement, site improvements, renovation of community center, playground, pool renovation, walkway and parking lot, security lighting and landscaping (Phase II, Fall 2001, $1,675,462).
- Woodland Park: renovation of community center, parking lot and picnic facilities, walkway additions, security lights, and landscaping (Phase II, December 2000, $783,960).

Other Park Improvements

- Heights Boulevard Park: community-based landscaping of esplanades.
- Spotts Park: being improved under a private development agreement, Phase I complete, Phase II construction of a basketball court shelter is pending).

Community Centers

- Fonde Community Center, 110 Sabine
- Memorial Park facilities
- Stude Community Center, 1031 Stude
- Woodland Community Center, 212 Parkview

Public Safety Facilities

- Houston Police Department, 61 Riesner
- Fire Station #6, 3402 Washington Ave.
- Fire Station #11, 460 T.C. Jester
- Fire Station #38, 1120 Silber

Libraries

- There are no libraries in the study area. The City of Houston Heights Library branch is located just north of the area at 1302 Heights Boulevard.

Other Government Buildings

- U.S. Post Office, 1050 Yale Street

Historic Buildings and Resources

Historical Markers

- St. Thomas High School, 2500 Memorial Drive
- Irvin Capers Lord, Glenwood Cemetery, 2525 Washington
- Colonel Benjamin Franklin Terry, Glenwood Cemetery, 2525 Washington
- Caspar Braun, Darius Gregg, Edwin Fairfax Gray, Glenwood Cemetery, 2525 Washington
- Washington Cemetery, 2911 Washington Avenue
- Damascus Missionary Baptist Church, 3211 Center Street
- Brown Chapel A.M.E. Church, 3208 Washington Avenue
- Shepherd Drive Methodist Church, 600 Shepherd Drive
- St. Mark's UMC, 600 Pecore Drive
- St. Paul A.M.E. Church, 1712 Edwards

National Register of Historic Places

- Heights Boulevard Esplanade, from White Oak Bayou to 20th Street, is deemed of local significance. It was designed by architect O. M. Carter and constructed in 1893.
- Sessums-James House (1894), 3802 Spencer
- Meitzen House (1900), 725 Harvard Street
- Wimberly House (c. 1906), 703 Harvard Street
- Johnson, Morris and Mary House (1924), 3818 Spencer
- Eaton House (1909-10), 510 Harvard
- Gustov Lund House (1896-1899), 301 E. 5th Street
- Residence (1904-05), 532 Harvard

- Samuel H. Webber House (1907), 407 Heights Boulevard
- Residence (1903), 112 W. 4th Street
- Heights State Bank Building, 3620 Washington Avenue
- Keller House (1914), 148 Heights Boulevard
- Residence (c. 1903), 112 W. 4th Street
- Residence (1903), 407 Heights Boulevard
- Residence (1912), 430 Harvard
- Residence (1906-07), 122 E. 5th Street
- Residence (c. 1904), 217 E. 5th Street
- Ogle-Joseph House (1907), 530 Harvard Street
- Isbell House (1908), 639 Heights Boulevard
- Woodward House (1906-10), 740 Rutland Street
- Otto House (1898), 835 Rutland Street
- Morton Bros. Grocery (1929), 401 W. 9th Street
- Thomas B. Reed House (1925), 933 Allston Street
- Otto H. Baring House (1921), 1030 Rutland Street
- Henry Hicks McCain House (1912), 1026 Allston
- Burnett House (1904), 219 W. 11th Street
- Webber House (1908), 1011 Heights Blvd.
- Hawkins House (1910), 1015 Heights Blvd.
- Renn House (1908), 1007 Heights Blvd.
- Doyle House (1906), 945 Heights Blvd.
- Residence (c 1903), 917 Heights Blvd.
- Residence (1903), 921 Heights Blvd.
- Residence (1906), 825 Heights Blvd.
- Charles Roessler House (1912), 736 Cortland
- James L. Jensen House (1914), 721 Arlington
- John W. Anderson (1907), 711 Columbia
- Residence (1906), 844 Columbia
- Residence (c. 1905), 844 Cortlandt

- Countryman House (1907-08), 402 E. 9th Street
- Elkins House (1908), 602 E. 9th Street
- Austin Copeland House I (1905), 921 Arlington
- Austin Copeland House II (1914), 925 Arlington
- J.H. Clare House (1904), 939 Arlington
- Residence (c. 1927), 943 ½ Cortlandt
- All Saints Roman Catholic Church (1926), 201 E. 10th Street
- Judge Robert L. Cole House (1909), 945 Harvard
- Mulcahy House (1910), 1046 Harvard
- Residence (1913), 402 E. 11th Street
- Moses A. Clanton House (1920), 1025 Arlington
- Charles E. Coombs House (1909), 1037 Columbia
- Roy Covington House (1941), 424 East Cowan Drive
- Jay L. Durham House (1903), 921 Heights Blvd.
- Knapp Chevrolet Building (1941), 815 N. Houston Avenue
- St. Joseph's Catholic Church (1901), 1505 Kane Street
- Fire Station #6 (1903), 1702 Washington Avenue
- Old Sixth Ward Historic District (formerly Sabine Historic District), bounded by Washington, Union, Houston, Capital and Glenwood Cemetery
- 1879 Houston Waterworks, 27 Artesian Street

State Archaeological Landmarks

- Old Jefferson Davis Hospital site, corner of Elder and Girard